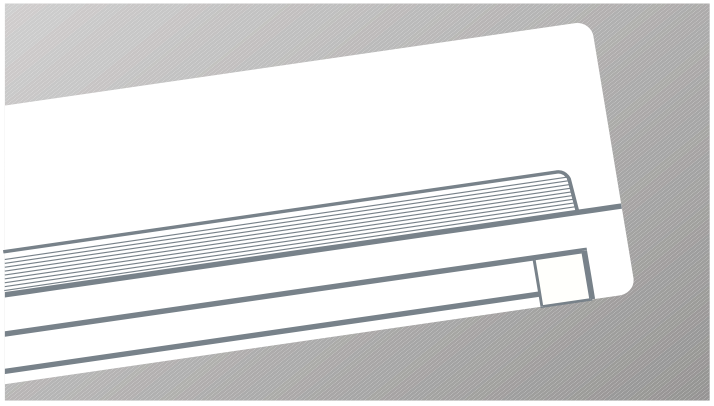
SAMSUNG

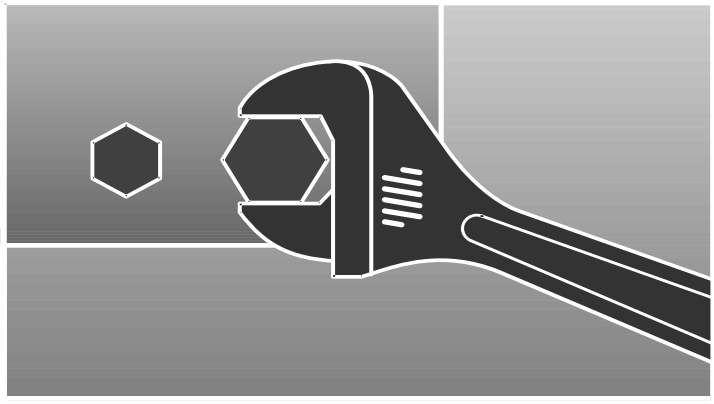
USER'S MANUAL & INSTALLATION MANUAL

AS10✳✳

SPLIT-TYPE AIR CONDITIONER

(Cooling)





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Register your product at www.samsung.com/global/register

Safety Precautions

The following safety precautions must be taken when using your air conditioner.

⚠ *WARNING* Risk of electric shock. • Can cause injury or death. • Disconnect all remote electric power supplies before servicing, installing or cleaning. • This must be done by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.

During operation

- Users of this product are cautioned not to attempt repair of this product at their own discretion. Instead, they are requested to directly contact a designated service center or the outlet at which the product was purchased.
- Never spill any kind of liquid into the unit. Should this happen, unplug or main switch off the unit and contact an authorized service center.
- Do not insert anything between the air outlet blades because the inner fan may be damaged and could cause injury. Keep children away from the unit.
- Do not place any obstacles in front of the unit.
- Do not spray liquid of any kind into the indoor unit. Should this happen, switch off the breaker used for your air conditioner and contact your installation specialist.
- Make sure that the unit is correctly ventilated at all times: Do not place clothing or other materials over it.
- If the wireless remote control will not be used for a long time, remove the batteries. (If applicable)
- When using a wireless remote control, the distance should not be more than 7 meters from the air conditioner. (If applicable)

Disposing of the unit

- Before throwing out the device, it is necessary to pull back the battery cells and get rid of them safely for recycling reasons.
- When you need to dispose of the unit, consult your dealer. If pipes are removed incorrectly, refrigerant may blow out and come into contact with your skin, causing injury. Releasing refrigerant into the atmosphere also damages the environments.
- Please recycle or dispose of the packaging material for this product in an environmentally responsible manner.

Others

- Never store or ship the air conditioner upside down or sideways to avoid damage to the compressor.
- The appliance is not intended for use by young children or infirm persons without supervision: Young children should be supervised to ensure that they do not play with the appliance.
- Max current is measured according to IEC standard for safety and current is measured according to ISO standard for energy efficiency.

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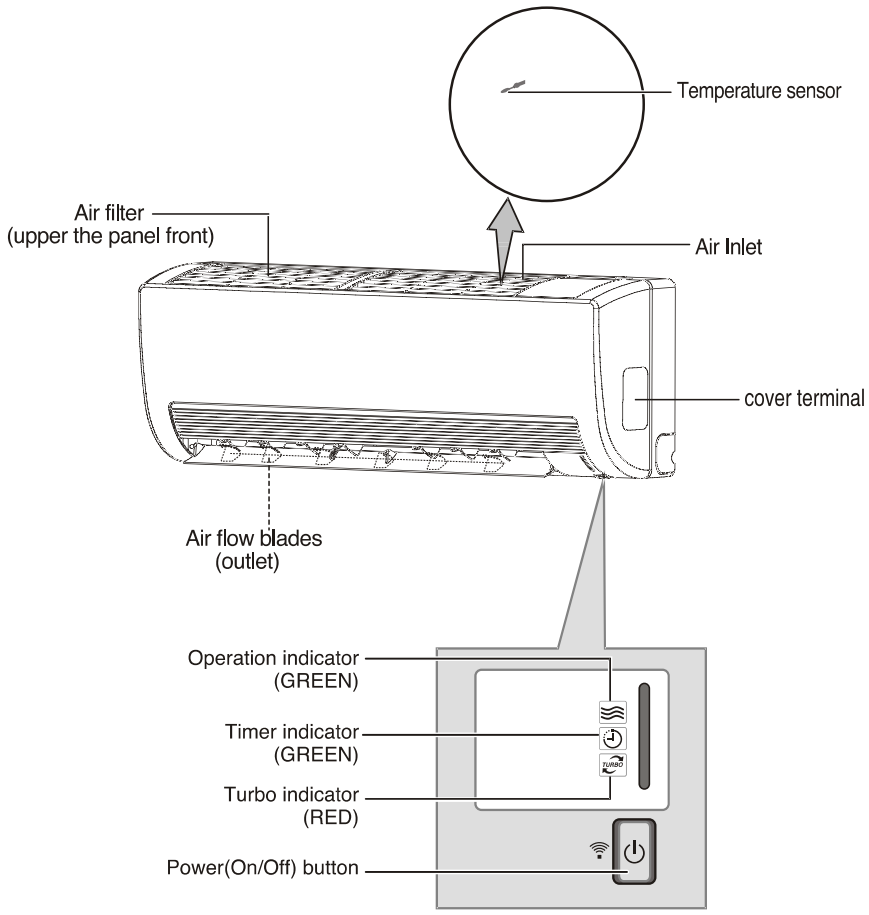
View of the Unit

The design and shape are subject to change according to the model.

Indoor Unit



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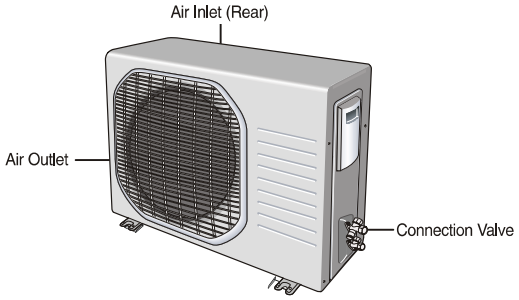
Outdoor Unit



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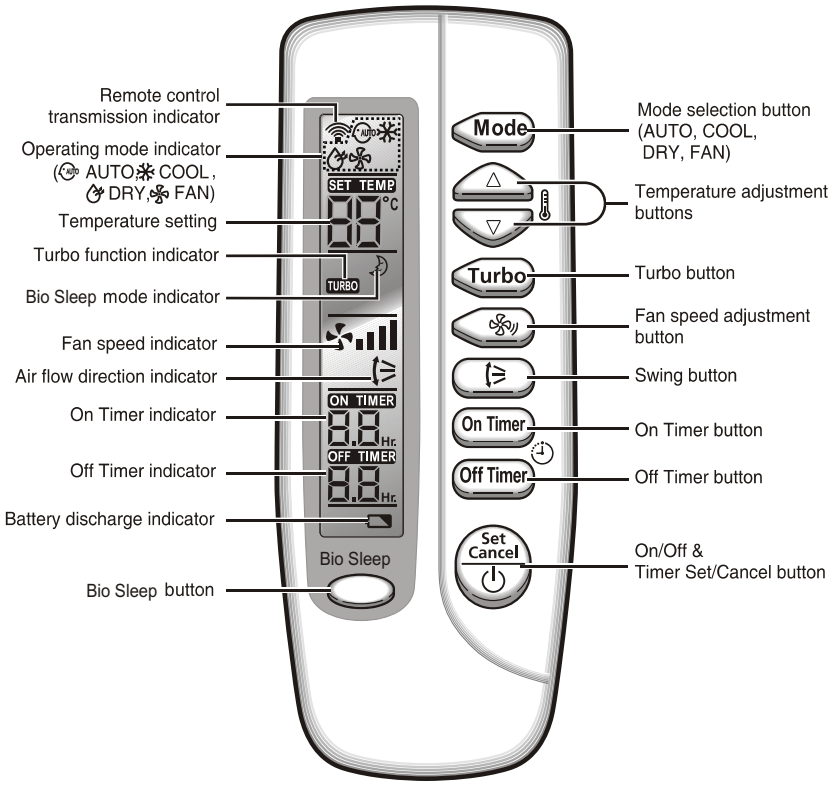
Remote Control - Buttons and Display



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Inserting the Remote Control Batteries

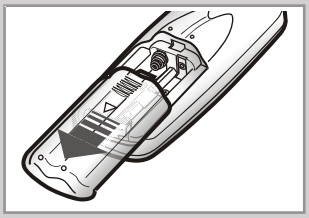
You must insert or replace the remote control batteries when :

- ◆ ***You purchase the air conditioner***
- ◆ ***The remote control does not work correctly***

Note

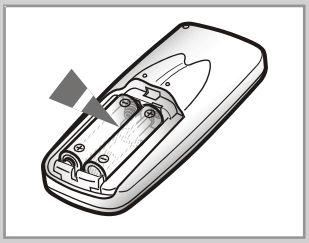
- ◆ Use two AAA, LR03 1.5V batteries.
- ◆ Do not use old batteries or different kinds of batteries together.
- ◆ Batteries may be completely discharged after 12 months, even if they have not actually been used.

1 Push the battery cover on the rear of the remote control with your thumb in the direction of the arrow and remove it.



2 Insert the two batteries, taking care to respect the polarities :

- ◆ + on the battery with + on the remote control.
- ◆ - on the battery with - on the remote control.



3 Close the cover by sliding it back until it clicks into place.

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Getting Started

You have just purchased a split type air conditioner and it has been installed by your installation specialist.

Your Owner's Instructions contains valuable information on using your air conditioner. Please take the time to read it as it will help you take full advantage of the unit's features.

The booklet is organized as follows.

- **The following figures are shown on pages from 4 to 6 :**
  - **Indoor and outdoor units**
  - **Remote control(buttons and display)**

  They will help you find the buttons and understand the symbols displayed.
- **In the manual, you will find a series of step-by-step procedures for each function available.**

The illustrations in the step-by-step procedures use three different symbols:

PRESS	**PUSH**	**HOLD DOWN**

Selecting the Automatic Operating Mode

You can start the air conditioner in Auto mode from your remote control. In the Auto mode, the cooling operation is selected automatically. You can also raise or lower the temperature but not the fan speed.

1 If necessary, press the Set Cancel button.

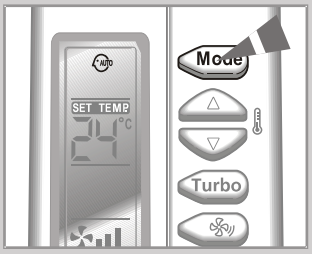
Result:
- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in the mode selected when the unit was last used.
- ◆ The indoor unit beeps.

IMPORTANT The air conditioner is fitted with protection mechanism to prevent the unit from being damaged when it is started immediately after being:
- ◆ Plugged in
- ◆ Stopped

It will start up normally after three minutes.

2 If the AUTO is not displayed at the top of the remote control, press the Mode button on the remote control one or more times until it appears.

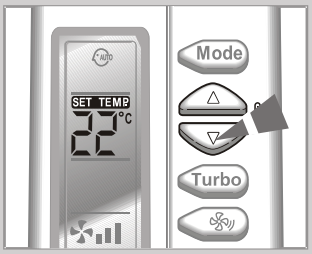
Result:
- ◆ The indoor unit beeps each time you press the Mode button.
- ◆ The air conditioner runs in the Auto mode.



Note You can change modes at any time.

3 To adjust the temperature, press the ▲ ▼ button one or more times until the required temperature is displayed.
Possible temperatures are between 16°C and 30°C inclusive.

Result:
- ◆ Each time you press the ▲ ▼ button:
  - The temperature is adjusted by 1°C
  - The indoor unit beeps



Cooling Your Room

You must select the Cool mode if you wish to adjust the:

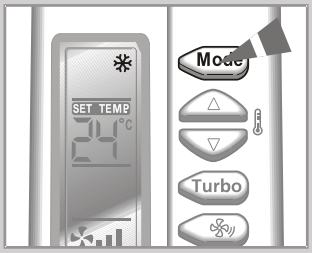
- ***Cooling temperature***
- ***Fan speed when cooling***

1 If necessary, press the Set Cancel button.

Result:
- The operation indicator on the indoor unit lights up.
- The air conditioner starts up in the mode selected when the unit was last used.
- The indoor unit beeps.

IMPORTANT The air conditioner is fitted with protection mechanism to prevent the unit from being damaged when it is started immediately after being:
- Plugged in
- Stopped

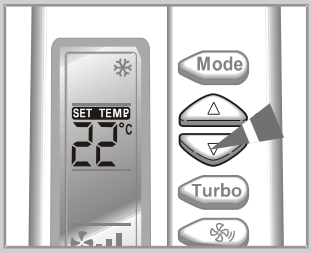
It will start up normally after three minutes.



2 If the ❄ is not displayed at the top of the remote control, press the Mode button on the remote control one or more times until it appears.

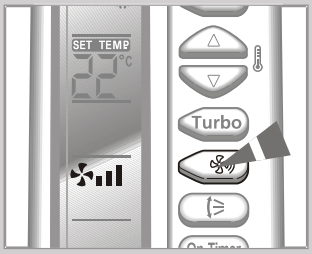
Result:
- The indoor unit beeps each time you press the Mode button.
- The air conditioner runs in the Cool mode.

Note You can change modes at any time.



3 To adjust the temperature, press the ▲ ▼ button one or more times until the required temperature is displayed.
Possible temperatures are between 16°C and 30°C inclusive.

Result:
- Each time you press the ▲ ▼ button:
  - The temperature is adjusted by 1°C
  - The indoor unit beeps
- The air conditioner starts cooling, provided that the room temperature is higher than the selected temperature.
- If the room temperature reaches the set temperature, the air conditioner stops cooling, but the fan is still operating.



4 Select the fan speed by pressing the Fan button one or more times until the required setting is displayed:

- Automatic (rotated : ➡ ➡)
- Low
- Medium
- High

Result: Each time you press the Fan button, the indoor unit beeps.

5 To control the direction of the air flow, refer to page 14.

Removing Excess Humidity

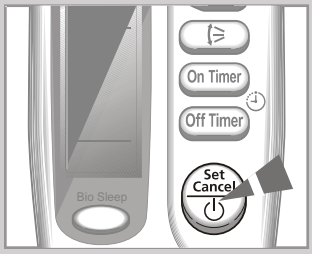
If the atmosphere in your room is very humid or damp, you can remove excess humidity without lowering the room temperature too much.

1 If necessary, press the Set Cancel button.

Result:
- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in the mode selected when the unit was last used.
- ◆ The indoor unit beeps.

IMPORTANT The air conditioner is fitted with protection mechanism to prevent the unit from being damaged when it is started immediately after being:
- ◆ Plugged in
- ◆ Stopped

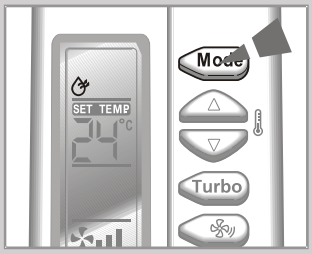
It will start up normally after three minutes.



2 If the is not displayed at the top of the remote control,press the Mode button on the remote control one or more times until it appears.

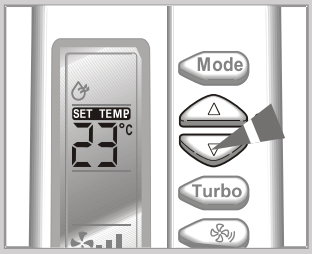
Result:
- ◆ The indoor unit beeps each time you press the Mode button.
- ◆ The air conditioner runs in the Dry mode.

Note You can change modes at any time.



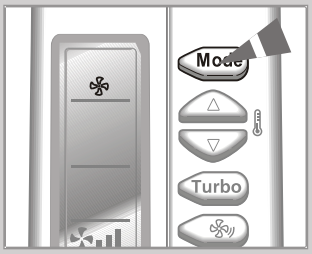
3 To adjust the temperature, press the button one or more times until the required temperature is displayed.
Possible temperatures are between 16°C and 30°C inclusive.

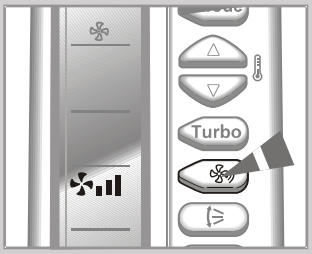
Result:
- ◆ Each time you press the button:
  - The temperature is adjusted by 1°C
  - The indoor unit beeps
- ◆ The air conditioner starts removing the excess humidity; the quantity of air is adjusted automatically.
- ◆ The fan is running in auto mode.



4 To control the direction of the air flow, refer to page 14.

Airing Your Room





If the atmosphere in your room is stale, you can air the room using the Fan feature.

1 If necessary, press the Set Cancel button.

Result:
- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in the mode selected when the unit was last used.
- ◆ The indoor unit beeps.

2 If the fan symbol is not displayed at the top of the remote control,press the Mode button on the remote control one or more times until it appears.

Result:
- ◆ The indoor unit beeps each time you press the Mode button.
- ◆ The air conditioner runs in the Fan mode.
- ◆ The temperature is set automatically.

Note You can change modes at any time.

3 Select the fan speed by pressing the fan button one or more times until the required setting is displayed:

- Low
- Medium
- High

Result:
- ◆ Each time you press the fan button, the indoor unit beeps.

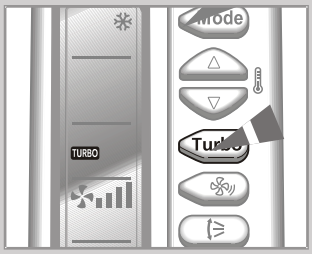
4 To control the direction of the air flow, refer to page 14.

Changing the Room Temperature Quickly

The Turbo cooling function is used to cool your room as quickly as possible.

Example : ***You have just come home and find that the room is very hot.***
You wish to cool it down as quickly as possible.

The Turbo function operates for 30 minutes with the maximum settings before returning automatically to the mode and temperature previously selected.



1 If necessary, press the Set Cancel button.

Result:
- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in the mode selected when the unit was last used.
- ◆ The indoor unit beeps.

IMPORTANT The air conditioner is fitted with protection mechanism to prevent the unit from being damaged when it is started immediately after being:
- ◆ Plugged in
- ◆ Stopped

It will start up normally after three minutes.

2 Press the Turbo button.

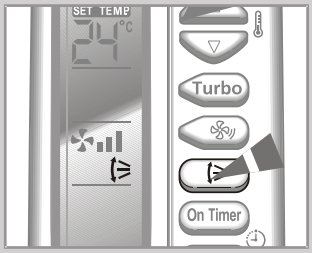
Result:
- ◆ The temperature and fan settings are adjusted automatically.
- ◆ The air conditioner cools the room as quickly as possible.
- ◆ After 30 minutes, the air conditioner is reset automatically to the previous mode, temperature and fan settings.
- ◆ You can select the Turbo function in the Auto or Cool mode. If you select this function in the Dry or Fan mode, it will return to the Auto mode.

3 If you wish to stop the Turbo function before the end of the 30-minute period, press the Turbo button one or more times until TURBO disappears.

Result: The air conditioner is reset automatically to the previous mode, temperature and fan settings.

4 To control the direction of the air flow, refer to page 14.

Adjusting the Air Flow Direction Vertically



Depending on the position of the indoor unit on the wall of your room, you can adjust the position of the outer air flow blade on the bottom of the unit, thus increasing the efficiency of the air conditioner.

1 Press the ( ) button one or more times as required.

Result: The outer blade is adjusted vertically.

2 If you want the blade to move up and down automatically when the air conditioner is operating, press the ( ) button.

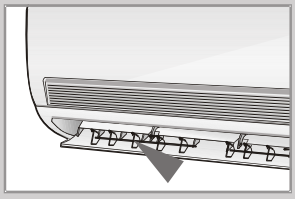
Result: The blade move up and down, around the base position set.

3 To stop the blade moving up and down, press the ( ) button again.

Note

If you switch the air conditioner...	*Then the blade is...*
Off	Closed completely.
On again	Set to the initial position powered.

Adjusting the Air Flow Direction Horizontally



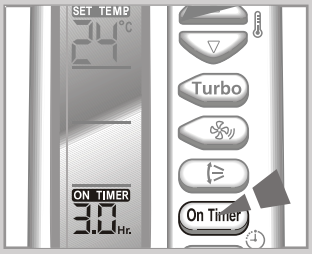
There are two sets of inner air flow blades. Just as the outer air flow blade can be adjusted vertically, the inner blades can be adjusted horizontally.

1 Adjust each set of inner blades to the required position, by pushing or pulling them sideways.

Setting the On Timer

The On Timer enables you to switch on the air conditioner automatically after a given period of time. You can set the period of time from 0.5 hour to 24 hours.

1 To set the operating time, press the On Timer button one or more times until the required time is displayed. Possible time is between 0.5 hour and 24 hour inclusive.

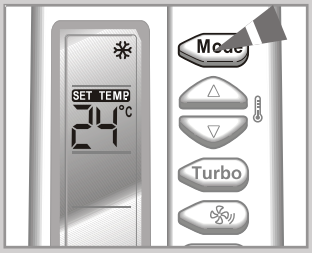


2 Press the Set Cancel button to complete the setting.

Result:
- The remaining time is displayed.
- Blinking of the timer indicator on the remocon stops.
- The selected mode and the temperature on the remocon display disappear after 10 seconds.
- The air conditioner will switch on automatically when the counter displayed on the remote control reaches the set time and disappears the On Timer setting.

3 To select an operating mode in advance, press the Mode button until the desired mode is displayed at the top of the remote control.

Result: The air conditioner will run in the selected mode when it is turned on.



To Cancel the On Timer

If you no longer wish to use the On Timer that you have set, you can cancel it at any time.

1 To cancel the On Timer, press the On Timer button one or more times until the timer setting disappears.

2 Press the Set Cancel button.

Note If you want to turn on the air conditioner before the timer reaches the setting time, press the Set Cancel button.

Setting the off Timer

The Off Timer enables you to switch off the air conditioner automatically after a given period of time. You can set the period of time from 0.5 hour to 24 hours.

1 To set the operating time, press the Off Timer button one or more times until the required time is displayed. Possible time is between 0.5 hour and 24 hour inclusive.

2 Press the Set Cancel button to complete the setting.

Result:
- The remaining time is displayed.
- Blinking of the timer indicator on the remocon stops.
- The air conditioner will switch off automatically when the counter displayed on the remote control reaches the set time and disappears the Off Timer setting.

Example **If you would like to turn the air conditioner on after 2 hours and to operate it for 2 hours:**

1. Press the On Timer button until '2 Hr' is displayed.
2. Press the Set Cancel button.
3. Press the Off Timer button until '4 Hr' is displayed.
4. Press the Set Cancel button.

Note You can see or change the setting mode and/or the temperature by pressing the Mode button or the ▲ ▼ button after setting the Off Timer.

To Cancel the Off Timer

If you no longer wish to use the Off Timer that you have set, you can cancel it at any time.

1 To cancel the Off Timer, press the Off Timer button one or more times until the timer setting disappears.

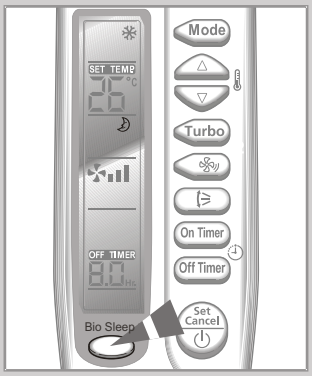
2 Press the Set Cancel button.

Note If you want to turn off the air conditioner before the timer reaches the setting time, press the Set Cancel button.

Selecting Bio Sleep mode

Bio Sleep mode helps users to fall asleep well after going to bed whether being too hot to sleep or being awakened by coldness, The Bio Sleep mode can be selected only when the air conditioner is switched on or off in cool mode.

Selecting Bio Sleep mode, as a result, the Off Timer will switch off the air conditioner after 8 hours automatically, or you can press the Bio Sleep button to set Off Timer in the range from 0.5 hour to 12 hours then press the Set/Cancel button to confirm this selection, during the period of Bio Sleep mode, the possible temperatures are between 16°C and 30°C inclusive, but the fan speed and the direction of the air flow is nonadjustable.



1 Press the Bio Sleep button one or more times until is displayed on your remote control.

Result:

- The indoor unit beeps
- If Bio Sleep is selected after switching on the unit, the air conditioner will run in Cool mode. During this period, the temperature displayed is one you set for the Cool mode If Bio Sleep is selected before switch on the unit, the air conditiner starts running in Cool mode and the temperature is set to 26°C.
- The fan is running in auto mode.

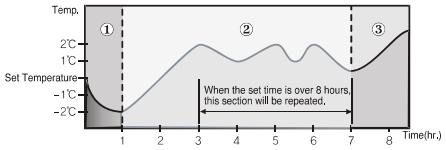
In cool mode

Bio Sleep mode keeps the skin temperature at the best during the 3 stages such as, Falling Asleep Stage ⇨ Sound Sleep Stage ⇨ Wake Up Stage in order.

① **Falling Asleep Stage :**
This stage supports enviroment to quickly cool down. Together with comfortable intermittent air, you will be able to fall asleep quickly.

② **Sound Sleep Stage :**
This stage helps users to take deep sleep and keep the healthy skin by controlling wavy temperature control and insensible air stream.

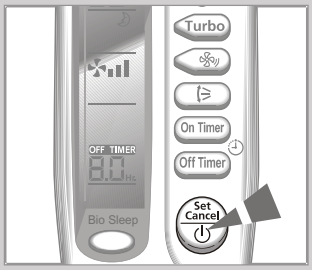
③ **Wake Up Stage :**
This stage supports comfortable intermittent air to the room to raise human body temperature for refreshing wake up.



- The recommended temperature is set between 25°C and 27°C, and 26°C is the most ideal temperature for comfortable sleep.
- Airflow blades and fan speed are controlled automatically as the above 3 stages in Bio Sleep mode.
- Set Off Timer in Bio Sleep mode over 5 hours. You feel disturbed sleep if the Bio Sleep is set too short or long because the basic off timer is set for 8 hours. If the Bio Sleep mode is set less than 4 hours, the operation will be stopped.
- After the set time. If the Bio Sleep mode is set over 5 hours, it will run as Wake Up Stage for the last one hours before stop.

To cancel the Bio Sleep

If you no longer wish to use Bio Sleep that you have set, you can cancle it at any time.



1 press the Set/Cancel button to switch off the air conditioner.

2 To cancle a selected Bio Sleep mode, you can also press the Turbo button, the Off Timer, the On Timer button, or Mode button, the air conditioner will run in cool mode.

Temperature and Humidity Ranges

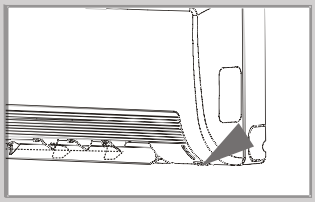
The following table indicates the temperature and humidity ranges within which the air conditioner can be used.

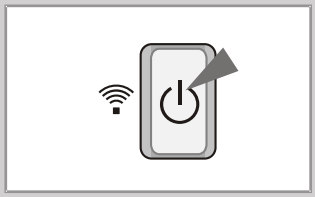
If the air conditioner is used at...	Then...
High temperatures	The automatic protection feature may be triggered and the air conditioner stopped.
Low temperatures	A water leak or some other malfunction may occur if the heat exchanger freezes.
High humidity levels	Water may condense on and drip from the surface of the indoor unit if it is used for long periods.

Mode	Outdoor Temperature	Indoor Temperature	Indoor Humidity
Cooling	19°C to 54°C approx.	16°C to 32°C approx.	80% or less
Dehumidifying	19°C to 54°C approx.	16°C to 32°C approx.	-

✻ ***If the cooling operation is used at over 32°C(indoor temperature), it does not cool at its full capacity.***

Operating Your Air Conditioner Without the Remote Control





Your air conditioner can be operated directly from the indoor unit if the remote control is lost or broken.

1 To switch the air conditioner on, press the ON/OFF switch on the right side of the indoor unit.

Result:
- ◆ The OPERATION indicator on the indoor unit comes on.
- ◆ The indoor unit beeps.
- ◆ The air conditioner starts up in the auto.

2 To switch the air conditioner off, press the ON/OFF switch again.

Note Even if the air conditioner has been switched on via the ON/OFF switch, operations can still be controlled using the remote control as usual.

Operating Recommendations

Here is a recommendation that you should follow when using your air conditioner.

Topic	Recommendation
Power failure	If a power failure occurs when the air conditioner is operating, the unit is switched off. When the power returns, the air conditioner starts up again automatically.

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Solving Common Problems

Before contacting the after-sales service, perform the following simple checks. They may save you the time and expense of an unnecessary call.

Problem	Explanation/Solution
The air conditioner does not operate at all	◆ Check that the breaker used for the air conditioner is switched on. ◆ Check that the operation indicator on the indoor unit is on; if necessary press the button on the remote control. ◆ Check whether the Timer indicator on the indoor unit is switched on. If so: - Wait until the switch-on time is reached and the air conditioner starts up automatically - Cancel the timer (see pages 15 and 16 for further details)
The air conditioner does not operate with the remote control	◆ Check that there are no obstacles between you and the indoor unit. ◆ Check the remote control batteries. ◆ Check that you are close enough to the indoor unit (seven meters/yards or less).
No beep is heard when you press the on the remote control	◆ Check that you are pointing the remote control at the remote control sensor in the right of the indoor unit. ◆ Replace the remote control batteries if necessary.
The air conditioner does not cool	◆ Check that the correct operating mode has been selected (Auto, Cool). ◆ The room temperature may be too low. ◆ Dust may be blocking the air filter guard; refer to page 20 for cleaning instructions. ◆ Check that there is no obstacle in front of the outdoor unit.
The fan speed does not change when you press the button	◆ Check that the operating mode is set to the Auto, Cool or Fan mode ; in the Dry mode, the fan speed changes automatically.
The air ow direction does not change when you press the button	◆ Check that the air conditioner has been switched on; if necessary, press the button on the remote control.
The timer is not correctly triggered	◆ Check that the timer has been programmed correctly; see pages 15 and 16.
Odour is permeated in the room during air conditioning	◆ Air the room.

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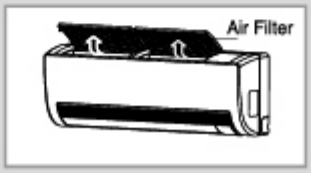
Cleaning Your Air Conditioner

To get the best possible use out of your air conditioner, you must clean it regularly to remove the dust that accumulates on the air filter.

IMPORTANT ***Before cleaning your air conditioner, ensure that you have switched off the breaker used for the unit.***

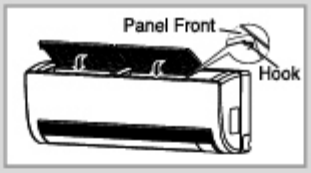
1 Open the guard air filters by pushing backward.

2 Pull guard air filters out of the panel front.



3 Remove all dust on the guard air filters with a vacuum cleaner or brush.

4 When you finished, insert guard air filters into the aperture in the panel front.



5 To close the guard air filters,fix it to hooks and push down to the panel front.

6 Clean the front grille with a damp cloth and mild detergent (do NOT use benzene, solvents or other chemicals).

Note ***If you have not used the air conditioner for a long period of time, set the fan going for three to four hours to dry the inside of the air conditioner thoroughly.***

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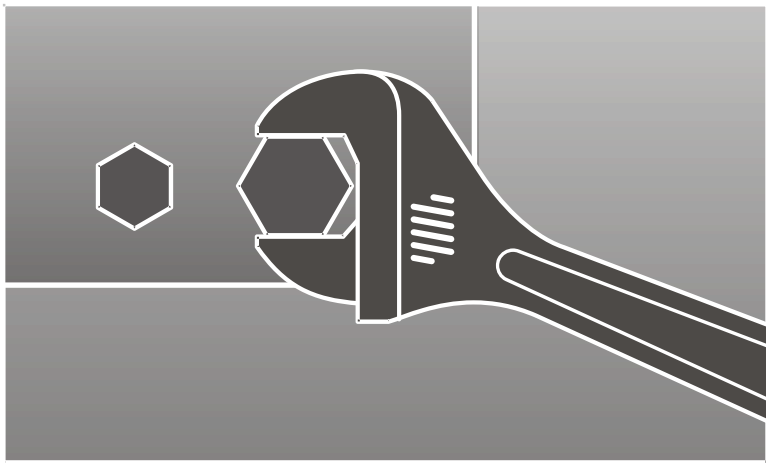
SAMSUNG

INSTALLATION MANUAL

AS10✳✳

Split-type Air Conditioner
(Cooling)



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- Air Conditioner and Accessories 5

◆ **INSTALLING THE UNIT**
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- Connecting the Assembly Cable 7
- Installing and Connecting the Indoor Unit Drain Hose 8
- Installing and Connecting the Indoor Unit Assembly Piping 9
- Cutting/Extending the Piping 10

◆ **COMPLETING THE INSTALLATION**
- Connecting Up and Purging the Circuit..... 11
- Performing Leak Tests..... 12
- Placing the Indoor Unit in Position..... 12
- Fixing the Outdoor Unit in Position 13
- Checking and Testing Operations 13
- Explaining Operations to the Owner 14

Safety Precautions

The following safety precautions must be taken when using your air conditioner.

WARNING

Risk of electric shock. • Can cause injury or death. • Disconnect all remote electric power supplies before servicing, installing or cleaning. • This must be done by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.

INSTALLING THE UNIT

- The unit should not be installed by the user. Ask the dealer or authorized company to install the units except room air conditioners for the U.S.A and Canada area.
- If the unit is installed improperly, water leakage, electric shock or fire may result.
- Mount with the lowest moving parts at least 2.5 m above the floor or grade level. (If applicable)
- The manufacturer does not assume responsibility for accidents or injury caused by an incorrectly installed air conditioner. If you are unsure about installation, contact an installation specialist.
- When installing the built-in type air conditioner, keep all electrical cables such as the power cable and the connection cord in pipe, ducts, cable channels e.t.c to protect them against liquids, outside impacts and so on.

POWER SUPPLY LINE, FUSE OR CIRCUIT BREAKER

- If the power cord of this air conditioner is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The unit must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.
- Do not use an extension cord with this product.
- If the unit is equipped with a power supply cord and a plug, the plug must be accessible after installation.
- The air conditioner must be installed in accordance with national wiring regulations and safety regulations wherever applicable.

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Deciding on Where to Install the Air Conditioner

When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account.

General

Do NOT install the air conditioner in a location where it will come into contact with the following elements:

- Combustible gases
- Saline air
- Machine oil
- Sulphide gas
- Special environmental conditions

If you must install the unit in such conditions, first consult your dealer.

Indoor Unit

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a surface that can support its weight.
- Choose a position that enables the piping and cables to be easily connected to the outdoor unit and the recommended length of 5 metres to be respected (15 metres maximum).
- Leave enough clearance beneath the indoor unit to enable the filters to be removed without hindrance.
- Maintain sufficient clearance around the indoor unit, as indicated in the diagram on the page opposite.
- Make sure that the water dripping from the drain hose runs away correctly and safely.
- Install the indoor unit on the wall which is far from the floor by more than 2.5 meters.

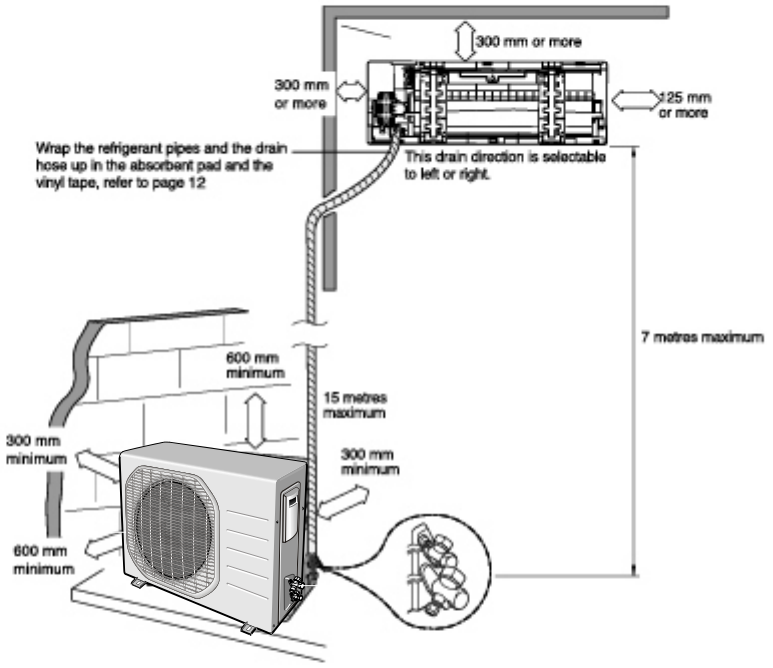
Outdoor Unit

- The outdoor unit must NEVER be placed on its side or upside down, as the compressor lubrication oil will run into the cooling circuit and seriously damage the unit.
- Choose a location that is dry and sunny, but not exposed to direct sunlight or strong winds.
- Do not block any passageways or thoroughfares.
- Choose a location where the noise of the air conditioner when running and the discharged air do not disturb any neighbours.
- Choose a position that enables the piping and cables to be easily connected to the indoor unit and the recommended length of 5 metres to be respected (15 metres maximum).
- Install the outdoor unit on a flat, stable surface that can support its weight and does not generate any unnecessary noise and vibration.
- Position the outdoor unit so that the air flow is directed towards the outside, as indicated by the arrows on the top of the unit.
- Maintain sufficient clearance around the outdoor unit, as indicated in the diagram on the page opposite.
- If the outdoor unit is installed at a height, ensure that its base is firmly fixed in position; the maximum height is 7 metres.
- Make sure that the water dripping from the drain hose runs away correctly and safely.

CAUTION

- ***You have just purchased a split-type room air conditioner and it has been installed by your installation specialist.***
- ***This device must be installed according to the national electrical rules.***
- ***Max input power & current is measured according to IEC standard and input power & current is measured according to ISO standard.***

Respect the clearances and maximum lengths indicated in the diagram below when installing the unit.



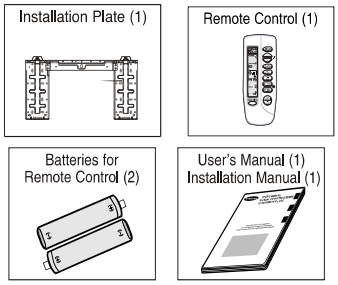
Bio'Sleep

Accessories

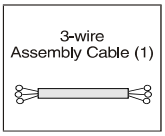
The following accessories are supplied with the air conditioner.

➢ ***The number of each accessory is indicated in parentheses.***

Accessories in the Indoor Unit Case



Accessories in the Outdoor Unit Case

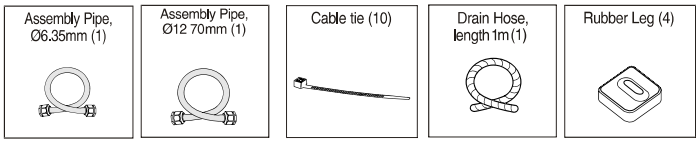


➢ ***The flare nuts are attached to the end of each pipe of an evaporator or a service port. Use the nuts when connecting the pipes.***

➢ ***The 3-wire assembly cables are optional. If they are not supplied, use the standard cable.***

➢ ***The rubber leg is only included when the air conditioner is supplied without the assembly pipe as seen in the picture below.***

The following connection accessories are optional. If they are not supplied, you should prepare them before installing the air conditioner.



➢ ***If these accessories are supplied, you can find them in the accessory box.***

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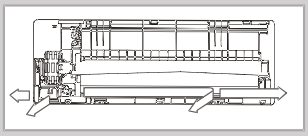
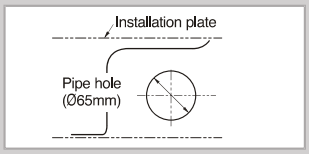
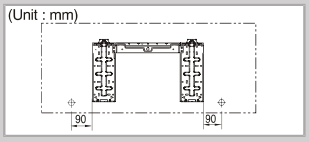
Fixing the Installation Plate







Before fixing the installation plate to a wall or window frame, you must determine the position of the 65 mm hole through which the cable, piping and hose pass to connect the indoor unit up to the outdoor unit. When facing the air conditioner in position on the wall, the piping and cable can be connected from the:

- ***Right***
- ***Left***
- ***Rear (right or left)***

1 Determine the position of the pipe and drain hose hole using the right figure and drill the hole with an inner diameter of 65 mm so that it slants slightly downwards.

2

If you are fixing the indoor unit to a...	**Then follow Steps...**
Wall	**3**.
Window frame	**4** to **6**.

3 Fix the installation plate to the wall in a manner appropriate to the weight of the indoor unit.

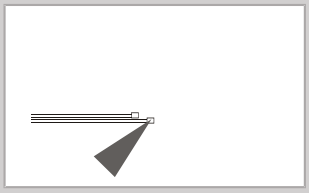
➢ If you are mounting the plate on a concrete wall with anchor bolts, the anchor bolts must not project by more than 20 mm.

4 Determine the positions of the wooden uprights to be attached to the window frame.

5 Attach the wooden uprights to the window frame in a manner appropriate to the weight of the indoor unit.

6 Using tapped screws, attach the installation plate to the wooden uprights, as illustrated in the last figure opposite.

Purging the Unit



On delivery, the indoor unit is loaded with an inert gas. All this gas must therefore be purged before connecting the assembly piping. To purge the inert gas, proceed as follows.

Unscrew the caps at the end of each pipe.

Result: All inert gas escapes from the indoor unit.

➢ ***To prevent dirt or foreign objects from getting into the pipes during installation, do NOT remove the caps completely until you are ready to connect the piping.***

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Connecting the Assembly Cable

The outdoor unit is powered from the indoor unit through the assembly cable If the outdoor unit is more than 5 meters away from the indoor unit, you must extend the cable. The maximum length of the cable is 15 (20) meters.

1 Extend the assembly cable if necessary.

2 Remove the cover terminal on the side of the indoor unit.

3 Pass the assembly cable through the rear of the indoor unit and connect the assembly cable to terminals as seen in the picture.
➢ Each wire is labeled with the corresponding terminal number.

4 Pass the other end of the cable through the 65mm hole in the wall.

5 Close the connector cover tightening the screw carefully.

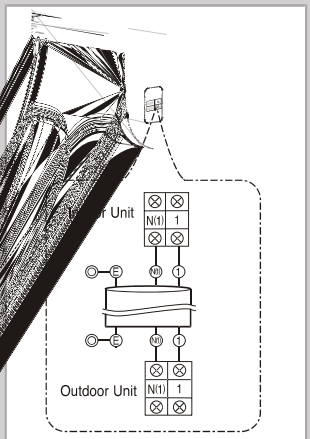
6 Close the cover terminal.

7 Remove the terminal board cover on the side of the outdoor unit.

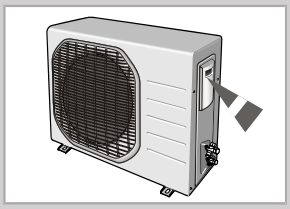
8 Connect the cables to the terminals as seen in the picture.
➢ Each wire is labeled with the corresponding terminal number.

9 Connect the earth conductor to the earth terminals.

10 Close the terminal board cover tightening the screw carefully.



**Screws on terminal block must not be unscrewed with the torque less than 12 kgf·cm.



** The designs and shape are subject to change according to the model.

Power cable specification

Model	Interconnection cable
✳✳10✳✳	3C Not less than 1.5mm²

➢ ***Connect the power cable to the auxiliary circuit breaker If every pole fails to connect to the power supply, it must be incorporated in a wire with a contact opening of >3mm.***

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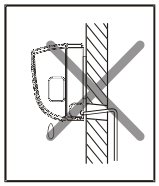
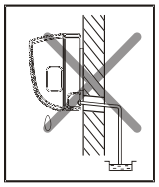
Installing and Connecting the Indoor Unit Drain Hose

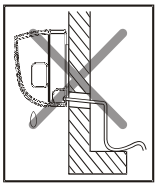
Care must be taken when installing the drain hose for the indoor unit to ensue that any condensation water is correctly drained outside. When passing the drain hose through the 65 mm hole drilled in the wall, check that none of the following situations occur.



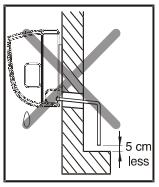
The hose must NOT slope upwards.



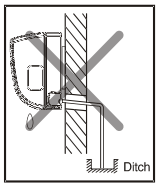
The end of the drain hose must NOT be placed in water.



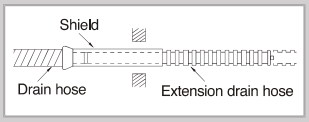
Do NOT bend the hose in different directions.



Keep a clearance of at least 5 cm between the end of the hose and the ground.



Do NOT place the end of the drain hose in a hollow.



To install the drain hose, proceed as follows.

1. If necessary, connect the 2-metre extension to the drain hose.
2. If you are using the extension, insulate the inside part of the extension drain hose with a shield.
3. Install a drain hose on one of two drain hose holes, then fix tight the end of a drain hose with a clamp.
   - ➢ Block the rest you don't use with a rubber stopper.
4. Pass the drain hose under the refrigerant piping, taking care to keep the drain hose tight.
5. Pass the drain hose through the hole in the wall, making sure that it is sloping downwards, as shown in the illustrations above.

➢ ***The hose will be fixed permanently into position once the whole installation has been tested for gas leaks; refer to page 11 for further detail.***

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Installing and Connecting the Indoor Unit Assembly Piping

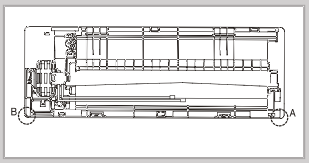
There are two refrigerant pipes of different diameters:

- ***A smaller one for the liquid refrigerant***
- ***A larger one for the gas refrigerant***

A short length of piping is already fitted to the air conditioner. You must extend this piping using assembly piping (optionally supplied).

The connection procedure for the refrigerant piping varies according to the exit position of the piping from the indoor unit, as seen when facing the air conditioner in position on the wall:

- ***Right (A)***
- ***Left (B)***
- ***Rear***



1 With a knife, cut out the appropriate knock-out piece on the rear of the indoor unit (unless you are connecting directly from the rear).

2 Smooth the cut edges.

3 Remove the protection caps on the pipes and connect the assembly piping to each pipe, tightening the nuts, first manually and then with a torque wrench, applying the following torque.

Outer Diameter	Torque (kgf•cm)
6.35 mm	140~170
9.52 mm	250~280

➢ If the piping must be shortened or extended, refer to page 10.

4 Cut off any excess foam insulation.

5 If necessary, bend the pipe round, along the bottom of the indoor unit and out through the appropriate hole, taking care to ensure that:
- The piping does not jut out from the rear of the indoor unit
- The bending radius is 100 mm or more

6 Pass the piping through the hole in the wall.

7 For further details on how to connect up to the outdoor unit and purge the circuit, refer to page 11 .

➢ ***The piping will be insulated and fixed permanently into position once the whole installation has been tested for gas leaks; refer to page 12 for further details.***

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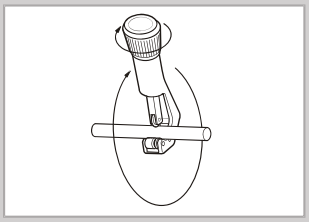
Cutting/Extending the Piping

5 metres of piping is supplied with the air conditioner(Optional). This length can if necessary be:

- ***Extended to a maximum of 15metres***
- ***Shortened as required***

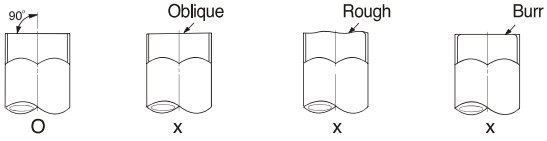
☛ ***If more than 5 metres of piping is required:***

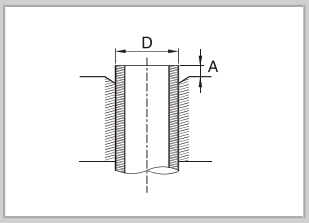
- ***The assembly cable must also be extended***
- ***Refrigerant must be added to the circuit by an approved installer; otherwise, the indoor unit may freeze***



1 Make sure that you have the required tools available (pipe cutter, reamer, flaring tool and pipe holder).

2 If you wish to shorten the piping, cut it using a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with the side of the pipe, and referring to the illustrations below for examples of edges cut correctly and incorrectly.

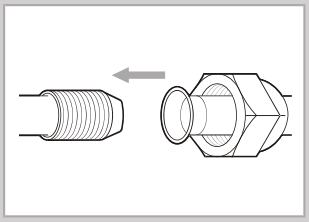




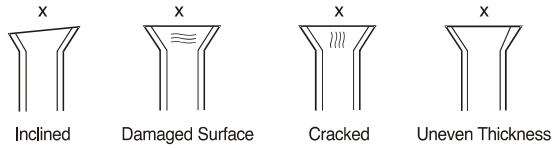
3 To prevent any gas from leaking out, remove all burrs at the cut end of the pipe, using a reamer.

4 Slide a flare nut on to the pipe and modify the flare.

Outer Diameter (D)	Depth (A)
6.35 mm	1.3 mm
9.52 mm	1.8 mm



5 Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



6 Align the pipes to be connected and tighten the flare nuts first manually and then with a torque wrench, applying the following torque.

Outer Diameter	Torque (kgf•cm)
6.35 mm	140 ~ 170
9.52 mm	250 ~ 280

7 For further details on how to connect up to the outdoor unit and purge the circuit, refer to page 11 .

Connecting Up and Purging the Circuit

The outdoor unit is loaded with sufficient R22 refrigerant for 5 metres of piping. The air in the indoor unit and in the pipe must be purged.
If air remains in the refrigeration pipes, it will affect the compressor, reduce to cooling/heating capacity and could lead to a malfunction.
Refrigerant for air purging is not charged in the outdoor unit.
Use Vacuum Pump as shown at the figure.

1 Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

2 Referring to the illustration opposite, tighten the flare nut first manually and then with a torque wrench, applying the following torque.

Outer Diameter	Torque (kgf·cm)
6.35 mm	140~170
9.52 mm	250~280

3 Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port as shown at the figure.

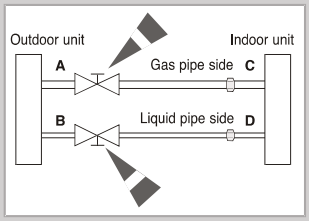
4 Open the valve of the low pressure side of manifold gauge counterclockwise.

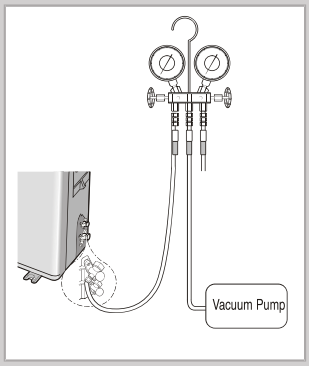
5 Purge the air from the system using vacuum pump for about 10 minutes.
- Close the valve of the low pressure side of manifold gauge clockwise.
- Make sure that pressure gauge show -0.1MPa(-76cmHg) after about 10minutes.
  This procedure is very important in order to avoid gas leak.
- Turn off the vacuum pump.
- Remove the hose of the low pressure side of manifold gauge.

6 Set valve cork of both liquid side and gas side of packed valve to the open position.

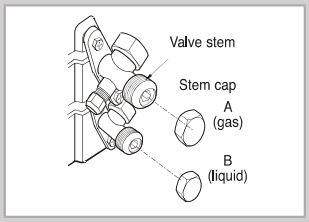
7 Mount the valve stem nuts and the service port cap to the valve, and tighten them at the torque of 183 kgf•cm with a torque wrench.

8 Check for gas leakage.
- At this time, especially check for gas leakage from the 3-way valve's stem nuts, and from the service port cap.





* The designs and shape are subject to change according to the model.



Adding Refrigerant

Refrigerant must be added if the piping measures more than 5 metres in length. This operation can only be performed by a qualified refrigeration specialist.

☛ If you have used...	Then...
More than 5 metres of piping	'10'g of refrigerant R22 must be added for each extra metre.
Less than 5 metres of piping	The purge time is normal.

Refer to the Service Manual for more details on this operation.

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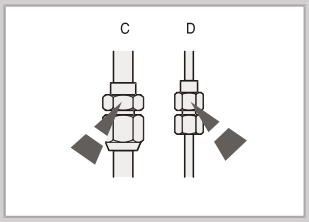
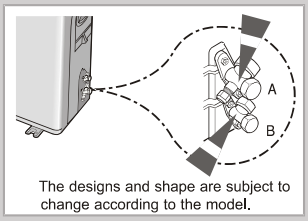
Performing Leak Tests



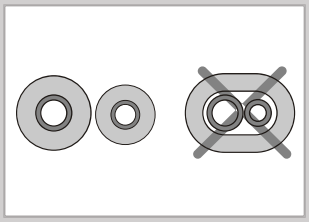


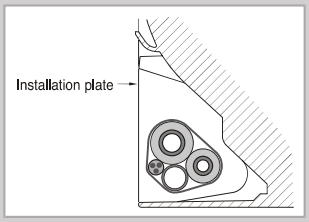
The designs and shape are subject to change according to the model.

Before completing the installation (insulation of the cables, hose and piping and fixing of the indoor unit to the installation plate), you must check that there are no gas leaks.

To check for gas leaks on the...	Then, using a leak detector, check the...
Indoor unit	Flare nuts at the end of sections C and D.
Outdoor unit	Valves on sections A and B.

Placing the Indoor Unit in Position





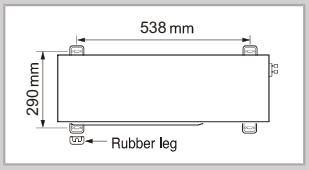
Once you have checked that there are no leaks in the system, you can insulate the piping, hose and cables and place the indoor unit on the installation plate.

1. To avoid condensation problems, place heat-resistant polyethylene foam separately around each refrigerant pipe in the lower part of the indoor unit.
2. Wrap the refrigerant pipes and the drain hose located at the rear of the indoor unit up in the absorbent pad.
   - ➢ Triply wind the pipes and hose to the end of the indoor unit with the absorbent pad (make intervals of 20mm).
3. Wind insulating tape around the pipes, assembly cable and drain hose.
4. Place the resulting bundle carefully in the lower part of the indoor unit, making sure that it does not jut out from the rear of the indoor unit.
5. Hook the indoor unit on to the installation plate and move the unit to the right and left until you are sure that it is securely in place.
6. Finish wrapping vinyl tape around the rest of the piping leading to the outdoor unit.
7. Using clamps (optionally supplied), attach the piping to the wall wherever possible.

Fixing the Outdoor Unit in Position

The outdoor unit must be installed on a rigid and stable base to avoid any increase in the noise level and vibration, particularly if the outdoor unit is to be installed close to a neighbour.

If it is to be installed in a location exposed to strong winds or at a height, the unit must be fixed to an appropriate support (wall or ground).



1 Position the outdoor unit so that the air flow is directed towards the outside, as indicated by the arrows on the top of the unit.

2 Attach the outdoor unit to the appropriate support using anchor bolts.

3 If the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

➢ ***Certainly fix up its rubber leg, in order to prevent its vibration and noise.***

Checking and Testing Operations

To complete the installation, perform the following checks and tests to ensure that the air conditioner is operating correctly.

1 Review all the following elements in the installation:
- Installation site strength
- Piping connection tightness to detect any gas leakages
- Connection wiring
- Heat-resistant insulation of the piping
- Drainage
- Earthing wire connection
- Correct operations (follow the steps below)

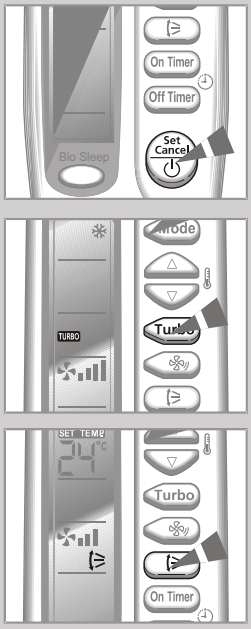
2 Press the Set Cancel button.

Result:
- The indicator lights on the indoor unit flash at half-second intervals.
- While the indoor unit opens, the indoor unit fan runs to start.

3 Press the Turbo button.

Result: The outdoor unit operates in cooling mode as following the room temperature.

4 Air flow direction — Press the button and check that the air flow blades work properly.



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Explaining Operations to the Owner

Before leaving the premises on which you have installed the air conditioner, you should explain the following operations to the owner, making reference to the appropriate pages in the owner's instruction booklet.

1	How to start and stop the air conditioner.
2	How to select the operating mode and adjust the temperature and fan settings.
3	How to adjust the air flow direction.
4	How to set the timers.
5	How to remove and clean the filters.

➢ ***Once the owner is happy with the basic operations, hand over the owner's instruction booklet and this installation manual for storage in a handy and safe place.***

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Memo

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